

ORDER

6650.11

**RADIO SIGNALING EQUIPMENT (RSE)
PROJECT IMPLEMENTATION PLAN**



May 17, 1993

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

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Initiated By: ANC-300

RECORD OF CHANGES

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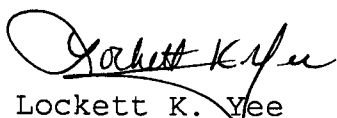
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FOREWORD

This order provides technical guidance and management direction for the orderly implementation of the Radio Signaling Equipment Project equipment, documentation, and training being purchased for installation in the Southern California Terminal Radar Approach Control Consolidation, and for the Dallas/Fort Worth Metroplex Plan.

The procedures and responsibilities in this order were developed using current agency directives. This order establishes program management and project implementation procedures and defines responsibilities governing the activities of organizations. This order also identifies and describes specific events and activities to be accomplished. The format and content of this order are prepared as specified in FAA-STD-036, Preparation of Project Implementation Plans, and Order 1320.1D, FAA Directives System.

Management responsibility for this project has been assigned to the Program Manager, Air/Ground Communications and Control Program Office, ANC-300, and, in particular, the Associate Program Manager for Engineering, Air/Ground Communications and Control Branch, ANC-130.



Lockett K. Yee
Program Manager for Air/Ground
Communications and Control



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CHAPTER 1. GENERAL

1. **PURPOSE.** This order transmits the Project Implementation Plan (PIP) for the Radio Signaling Equipment (RSE) Project and presents overall technical guidance and management direction for the orderly procurement and implementation of the RSE, RSE documentation, and RSE training program for the consolidated Southern California TRACON (SCT) and the Dallas/Fort Worth (D/FW) Metroplex. The Capital Investment Plan (CIP) Project 32-26 provides for the Southern California Terminal Airspace Realignment (STAR)/SCT restructuring of airspace and associated air traffic control operation equipment, and consolidation of five existing TRACON's into a common facility at San Diego, California. The CIP Project 32-22 provides for the D/FW Metroplex Plan which establishes, expands, and modernizes facilities and equipment to improve the terminal air traffic control system in the Dallas/Fort Worth, Texas area. Support and cooperation by other organizations is essential for successful implementation of the RSE Project.

2. **DISTRIBUTION.** This order is distributed to division level in Systems Maintenance, Operational Support, NAS Transition and Implementation, Air Traffic Plans and Requirements, Contracting and Quality Assurance, the Office of Training and Higher Education Services, and the Office of the Program Director for Communications and Aircraft Acquisition; branch level to regional Airway Facilities and Air Traffic divisions, the FAA Academy and FAA Logistics Center at the Mike Monroney Aeronautical Center; to division level in the Engineering, Integration and Operational Evaluation Service at the FAA Technical Center, and a standard distribution to all Airway Facilities General NAS sectors, sector field offices, sector field units, and sector field office units and Air Traffic field offices in the Western Pacific and Southwest Regions.

3. **DEFINITIONS.** The following abbreviations and acronyms are used in this order:

AC	Alternating Current
AF	Airway Facilities
APME	Associate Program Manager for Engineering
APML	Associate Program Manager for Logistics
ATC	Air Traffic Control
CAI	Contractor Acceptance Inspection
CBD	Commerce Business Daily
CCL	Channel Control--Local
CCR	Channel Control--Remote
CIP	Capital Investment Plan
COTS	Commercial Off-The-Shelf

DAV	Data Above Voice
dB	Decibels
D/FW	Dallas/Fort Worth
DRR	Deployment Readiness Review
F&E	Facilities & Equipment
FAA	Federal Aviation Administration
FAALC	FAA Logistics Center
FSK	Frequency Shift Keying
ICSS	Integrated Communications Switching System
ILSP	Integrated Logistics Support Plan
JAI	Joint Acceptance Inspection
LRU	Line Replaceable Unit
NAILS	National Airspace Integrated Logistics Support
NAS	National Airspace System
NDI	Non Developmental Item
OT&E	Operational Test and Evaluation
PIP	Project Implementation Plan
PSM	Power Supply/Alarm Module
PTD	Provisioning Technical Documentation
RCE	Radio Control Equipment
RSE	Radio Signaling Equipment
SAB	Shelf Assembly Backplane
SCT	Southern California TRACON
SEI	System Engineering and Integration
STAR	Southern California Terminal Airspace Realignment
TRACON	Terminal Radar Approach Control
VF	Voice Frequency

4. **AUTHORITY TO CHANGE THIS ORDER.** The Program Manager for Air/Ground Communications and Control ANC-300, may issue changes to this order necessary to manage and implement the project which do not affect policy, delegation of authority, or an assignment of responsibility.

5.-19. **RESERVED.**

CHAPTER 2. PROJECT OVERVIEW

20. **SYNOPSIS.** The RSE Project equipment is being procured by means of a sole-source contract (DTFA01-92-C-00050) with Intellect, Incorporated. This equipment will be used to support a requirement necessitated by consolidation of five Southern California TRACON facilities, and will be used for the Dallas/Fort Worth Metroplex project which establishes, expands, and modernizes facilities and equipment to improve the terminal air traffic control (ATC) system in the Dallas/Fort Worth, Texas area. The RSE implementation uses existing commercial off-the-shelf (COTS) tone type equipment which is currently installed throughout the FAA. This tone type equipment was required because the planned NDI equipment acquisition for the FAA-wide Radio Communications Equipment (RCE) implementation would not be available in time for the Southern California consolidation, or for the Dallas/Fort Worth Metroplex installation. The RCE project has been further down scoped since the inception of RSE.

21. **PURPOSE.** This project is to provide radio signaling and control equipment necessitated by the imminent consolidation efforts of the SCT and the D/FW Metroplex Plan. This RSE is essential to the control of air-to-ground communications equipment, providing integrated voice and control, and is consistent with equipment currently being used by the FAA. RSE provides the required interfaces with switching equipment at control sites, radio equipment at remote sites and the transmission media.

22. **HISTORY.** The planned consolidation of five existing TRACON's into one SCT in San Diego, and the D/FW Metroplex Improvement Plan are projects designed to provide improved service to users of the airspace in Southern California and Dallas/Fort Worth. The following five Southern California Level V TRACON's will be consolidated into a common facility at Miramar Naval Air Station, San Diego, California: Los Angeles (L56), Coast (NZJ), Burbank (B90), San Diego (NKX), and Ontario (O40). Combining these TRACON's will provide real-time traffic management, reduce delays, and enhance air traffic safety. The D/FW Metroplex air traffic system plan describes improvements needed to D/FW airspace for actual and forecast air traffic growth.

23. **ACQUISITION STRATEGY.** The acquisition strategy of the RSE Project equipment and training is described in subparagraphs 23.a. and 23.b.

a. The FAA utilized a sole-source contract to acquire RSE for the SCT and D/FW Metroplex. The RSE requirement was published in the Commerce Business Daily (CBD) seeking sources in addition to Intellect. Upon investigation of responses, no other firm could provide the minimum requirements as stated in the CBD. Only Intellect, Incorporated, was qualified for this acquisition. Intellect is a vendor for regionally procured tone equipment currently installed in the National Airspace System.

b. The equipment and training to be obtained will be (or have been) delivered as follows and include:

(1) Training: Four training courses for 10 students each. Two 2-day classes were conducted at the Southern California TRACON during the week of November 30, 1992, and two 2-day classes will be conducted at the Dallas/Fort Worth Metroplex during the week of May 4, 1993.

(2) Equipment:

(a) Thirty sets of documentation delivered to the SCT on November 25, 1992;

(b) Fifty control and remote units delivered to the SCT on December 15, 1992;

(c) Thirty sets of documentation delivered to D/FW on April 28, 1993;

(d) Eighty-two control and remote units delivered to D/FW on June 15, 1993, and

(e) Sixty-eight control and remote units delivered to the SCT on September 15, 1993.

NOTE: The information in 23.b. reflects the requirements in the contract. Early delivery of equipment was accepted in December 1992 and January 1993. Additionally, two sets of documentation were delivered to the National Engineering Field Support Division, AOS-200.

24.-29. RESERVED.

CHAPTER 3. PROJECT DESCRIPTION

30. **FUNCTIONAL DESCRIPTION.** The equipment functional performance characteristics are specified in subparagraphs 30.a.-30.e.

a. Each unit has an independent power supply associated with it so that failure of an individual power supply does not impair more than one channel.

b. Each unit has a minimum voice frequency response of +/- 2 dB (relative to 1000 Hertz) within the bandwidth of 300 to 2400 Hertz.

c. Equipment is of a design currently operational within the FAA ATC environment and demonstrated to properly interface to the FAA's four-channel position equipment at the control unit, and the FAA's transmitters and receivers at the remote unit.

d. The equipment operates from a 50-400 Hertz power source of 105-125 volts AC.

e. Each channel has one control unit and one remote unit capable of communicating over a standard four-wire leased telephone circuit.

31. **PHYSICAL DESCRIPTION.** The equipment physical characteristics are specified in subparagraphs 31.a-31.c.

a. Each unit is 1.75 inches in height (an A panel).

b. Unit enclosures are 6.25 inches deep.

c. Each unit is 19 inches wide and fits into a standard 19 inch equipment rack.

32. **SYSTEM REQUIREMENTS.** The RSE Contract requires the vendor to provide the following:

a. Two hundred "channels" of RSE with each "channel" consisting of one control unit to be located at the Tower/TRACON and one remote unit to be located at the radio equipment site as described in subsubparagraphs 32.a.(1).-32.a.(2).

(1) Control Unit Part Number 7705A (consisting of 5130B DAV, 5134C CCL, 6112A PSM, 7039I SAB); and

(2) Remote Unit Part Number 7706A (consisting of 5130B DAV, 5135A CCR, 6112A PSM, 7039I SAB).

b. Sixty sets of documentation. Each set of documentation shall contain all applicable instruction and repair manuals, drawings, etc., needed to understand, install and maintain this equipment. All documentation will be delivered in advance of the training courses.

c. Four training courses for maintenance and installation (10 students per course).

33. **INTERFACES**. The RSE will interface with solid-state radio transmitters and receivers at remote sites and with the Integrated Communications Switching System (ICSS) at control sites. Both ends of the RSE will interface with four-wire voice-grade telephone circuits.

34.-39. **RESERVED**.

CHAPTER 4. PROJECT SCHEDULE AND STATUS

40. **PROJECT SCHEDULES AND GENERAL STATUS.** The project schedule for the procurement process has been completed. Detailed test schedules are still under development.

41. **MILESTONE SCHEDULE SUMMARY.** The milestones for the project are presented as follows:

<u>Milestone</u>	<u>Date</u>
Commerce Business Daily Notice	01/31/92
Procurement Request	04/10/92
Request For Proposal	05/19/92
Technical Proposal Evaluation Completed	06/19/92
Cost Proposal Evaluation Completed	06/19/92
Contract Award	08/03/92
Training for SCT Maintenance Personnel	11/30/92
First Equipment Delivery to SCT	12/15/92
Training for D/FW Metroplex Maintenance Personnel	05/04/93
Delivery to D/FW Metroplex	06/15/93+
Second Delivery to SCT	09/15/93+

+ See note in subparagraph 23.b. regarding early equipment delivery.

42. **INTERDEPENDENCIES AND SEQUENCE.** The RSE is a limited deployment system acquisition; therefore, the appropriate regional division offices will submit to the Technical Training and Certification Branch, ASM-250, training requirements for the RSE equipment for approval. The FAA Academy will not conduct training. Before delivery of the RSE systems to the sites, the Airway Facility Sector Manager will ensure that sufficient personnel to maintain the systems are scheduled for contractor provided onsite training. The RSE Contractor is responsible for supplying copies of all technical training materials to SCT and D/FW.

43.-49. **RESERVED.**



CHAPTER 5. PROJECT MANAGEMENT

50. PROJECT MANAGEMENT, GENERAL. The project management organizations at the Washington headquarters and regions which will be responsible for the successful implementation of the RSE and their responsibilities are shown in subparagraphs 50.a.-50.c.

a. Washington Headquarters Project Management. Project management areas of responsibility during and after implementation are described as follows:

(1) Program Manager for Air/Ground Communications and Control (ANC-300). ANC-300 has responsibility for the management of the RSE Program.

(2) NAILS Program Division, NAS Transition and Implementation Service (ANS-400). ANS-400 is responsible for ensuring timely integration of the NAILS requirements into all aspects of project development and acquisition.

(3) Air/Ground Communications and Control Program (ANC-130). Within the Communications Engineering Division (ANC-100), ANC-130 serves as the RSE Project Manager and has overall management responsibility for the implementation. A member of the branch is designated RSE Project Manager. The implementation responsibilities of the project manager are to ensure that the RSE is ready for integration into the SCT and D/FW, and that the FAA will be ready to receive, operate, and provide life-cycle support to the RSE when contractor obligation is complete.

(4) Contracting Officer (ASU-300). The contracting officer will prepare contractual documents and perform contract management activities concerned with assuring that the terms of the contract are met. The contracting officer is the only person authorized to make changes that affect prices, deliverables, and/or schedules.

(5) System Engineering and Integration (SEI) Contractor. The SEI contractor provides schedules, Program Director Status Reports, and documentation.

(6) The Project Support Contractor. Responsibilities of the project support contractor are to:

(a) Provide technical guidance and direction, through ANC-130, to the RSE contractor.

- (b) Perform systems engineering and analysis.
- (c) Ensure adherence to SCT and D/FW Metroplex Plan requirements.
- (d) Assist in development of the master test plan.
- (e) Provide program information and status.

b. Regional Project Management. The Western Pacific and Southwest Regions will designate a regional RSE implementation Associate Project Manager who is responsible for the planning and implementation of all phases of the RSE implementation project activities within the region. Responsibilities of the regional Associate Project Manager are to:

(1) Interface with the ANC-130 Project Manager on all implementation activities including the following major items:

- (a) Implementation planning.
- (b) Project funding.
- (c) Scheduling.
- (d) Testing.
- (e) Training.
- (f) Maintenance.
- (g) Integrated logistics support.

(2) Coordinate with the regional divisions and facilities in matters pertaining to the RSE Project and be the focal point for:

- (a) Site configuration management.
- (b) Site preparation support.
- (c) Site survey support.
- (d) RSE Project equipment installation support.
- (e) Site testing support.
- (f) Update of configuration management data base.

(g) Update of regional documents

(3) Interface with the AF sectors on all RSE Project implementation activities including the following major items:

- (a) Hardware delivery.
- (b) Installation.
- (c) Integration and testing.
- (d) System shakedown.
- (e) Operational Readiness Demonstration.
- (f) Equipment relocation/disposal

(4) Provide implementation direction to regional AF technical representatives.

c. Facility Project Management. An Associate Project Manager representative at each facility will be assigned by the region and will have site responsibility for the management of the RSE Project equipment within the site. The representative will be responsible for coordination with AF for the proper testing and location placement at the sites. The duties of the representative are to:

(1) Ensure that site preparation activities are complete and acceptable prior to RSE Project equipment delivery.

(2) Assist with site surveys.

(3) Coordinate and schedule site personnel necessary to support or monitor the testing and location placement of RSE Project equipment and the site concurrence.

(4) Report any problems encountered during the testing and resolve those problems with the help of the regional Associate Project Manager or ANC-130 as required.

(5) Sign-off on the delivery and successful site testing of the RSE Project equipment and training.

(6) Provide the regional Associate Project Manager with periodic status and progress reports on the testing, location, and placement of the RSE Project equipment, and training course completion records.

(7) Develop and maintain site specific implementation schedules by coordinating with the Regional Associate Project Manager.

51. **PROJECT CONTACTS.** The project management personnel designated as contacts for their respective organizations in the Washington headquarters, and regions are listed in subparagraphs 51.a.-51.b. Project management personnel for SCT and D/FW will be identified by the regions.

a. Headquarters Contact Points:

<u>Name</u>	<u>Org./Title</u>	<u>FTS/Com. Number</u>
Lockett Yee	ANC-300/Division Mgr.	(202) 646-5537
Nathaniel Johnson	ANC-130/Branch Mgr.	(202) 646-4974
Arnold Meyers	ANC-130/Project Mgr.	(202) 646-4826
John Vogt	ASU-330/Contr. Officer	(202) 267-3620
Mike Goldstein	ANS-420/APML	(202) 267-8161
Thomas Jennings	ACW-400F/APMT	(609) 484-5878
Charles Gage	AOS-200/Division Mgr.	(202) 680-3647
Owen Harned	ANS-340/SEIC Support	(202) 646-5437
Frank McArthur	ANS-340/SCT Prog. Mgr.	(202) 267-8680
Jerry Kaminetzky	ANS-320/D/FW Proj. Engr.	(202) 267-9753
Ed Gibbon	ISN/RSE Task Manager	(301) 469-0400

b. Regional Contact Points. The project management Regional representatives identified by the regions are:

<u>Name</u>	<u>Org./Title</u>	<u>FTS/Com. Number</u>
Chuck Pealer	AWP-454/Region APM	(310) 297-0045
Gary Galbraith	ASW-429/Region APM	(817) 740-3437

52. **PROJECT COORDINATION.** In addition to the project management organization described in paragraph 50, the coordination and active support of a number of other FAA organizations will be of great importance to the successful implementation of the RSE Project equipment. Organizations actively supporting RSE implementation are shown in subparagraphs 52.a.-52.c.

a. FAA Washington Headquarters. Headquarters organizations supporting the implementation of the RSE Project:

ANS-300	Special Programs Integration Division
ASU-400	Contracting and Quality Assurance, Industrial Division
ASM-200	Systems Maintenance Service, Maintenance Operations Division

ATQ-1 Office of Independent Operational Test and
 Evaluation Oversight
ASM-700 NAS Support Division

b. FAA Technical Center. The System Design/Transition/Communications Division, ACW-400F, serves as the lead for FAA testing and the development of a Master Test Plan. They support the RSE implementation as follows:

- (1) Develop the FAA Master Test Plan and assist in conducting testing.
- (2) Provide technical support to ANC-130 throughout the RSE Project implementation.
- (3) Monitor contractor factory acceptance testing.
- (4) Support AOS-200 in shakedown testing.
- (5) Develop the RCE Project Master Test Plan in coordination with ANC-130 and AOS-200.
- (6) Coordinate testing with the contractor, AOS-200, AWP-400, and ANC-130.

c. Mike Monroney Aeronautical Center (AMC). The FAA Logistics Center (AML-200) and Operational Support Service, National Engineering Field Support Division (AOS-200), responsibilities are to:

- (1) FAA Logistics Center (AML-200).
 - (a) Provide cataloging for the RSE Project equipment.
 - (b) Participate in the development of logistics plans for support of the RSE Project equipment.
 - (c) The FAA Logistics Center is not responsible for supply support, maintenance, or contract management of the RSE hardware or contract. This support will be provided by each region.
- (2) National Engineering Field Support Div. (AOS-200).
 - (a) Develop shakedown test plan and conduct shakedown test following Government receipt of RSE Project equipment.

(b) Provide second level engineering support of project equipment restoration.

(c) Provide facilities configuration management after receipt of the RSE project equipment.

53. PROJECT RESPONSIBILITY MATRIX. Figure 5-1, Project Responsibility Matrix, shows the organizational responsibilities and significant actions to be performed during the RSE Project equipment implementation.

54. PROJECT MANAGERIAL COMMUNICATIONS. The RSE Project Office will manage the project using the established communications channels (written and oral) between the project manager and the contracting officer and between the contracting officer and the contractor.

55. IMPLEMENTATION STAFFING. The Systems Maintenance Service, Maintenance Operations Division, Operations Program Branch (ASM-260) is responsible for providing staffing standards; however, there are no unique or peculiar staffing requirements associated with the RSE Project. Responsible organizations will accomplish their tasks with existing resources.

56. PLANS AND REPORTS. The following documents are required during the acquisition, testing, and implementation of the RSE.

a. Contractor Documentation Delivered with Proposal. The RSE Project vendor submitted the training syllabus with the proposal.

b. Contractor Documentation. The RSE Project contractor has submitted the technical instruction materials in accordance with the final negotiated contract.

c. FAA Implementation Plans and Reports. The RSE Project implementation activities will be documented in the plans and reports listed as follows:

<u>FAA Documentation</u>	<u>Lead</u>
Project Master Test Plan	ACW-400F/ANC-130
Integrated Logistics Support Plan	ANS-420
Deployment Readiness Review Report	ANC-130
Integration Test Plan	ACW-400F
Shakedown Test Plan	AOS-200

FIGURE 5-1.
PROJECT RESPONSIBILITY MATRIX

ITEM ACTIVITY	ACTION	ANC-130	VENDOR	ACW-400F	AOS-200	ASW-17 AWP-17	ASW-450 AWP-450	ASW-420 AWP-420	SECTORS
EQUIPMENT	PROVIDE								
	RECEIVE								
	INSTALL								
PRODUCTION ACCEPTANCE TEST & EVAL.	PLAN								
	CONDUCT								
INTEGRATION TESTING	PLAN								
	CONDUCT								
MAINTENANCE	SITE								
	DEPOT								
SHAKEDOWN TESTING	PLAN								
	CONDUCT								
INITIAL TRAINING	PLAN								
	CONDUCT								
FOLLOW-ON TRAINING	PLAN								
	CONDUCT								
ATTRITION TRAINING	PLAN								
	CONDUCT								

ANC-130
VENDOR
ACW-400F
AOS-200
ASW-17
AWP-17
ASW-450
AWP-450
ASW-420
AWP-420

AIR/GROUND COMMUNICATIONS AND CONTROL PROGRAM
INTELECT, INC.
SYSTEM DESIGN/TRANSITION/COMMUNICATIONS DIVISION
NATIONAL ENGINEERING FIELD SUPPORT DIVISION
EMPLOYEE DEVELOPMENT BRANCH (SOUTHWEST REGION)
TRAINING/PERFORMANCE MANAGEMENT BRANCH (WESTERN PACIFIC REGION)
ESTABLISHMENT ENGINEERING BRANCH (SOUTHWEST REGION)
RESOURCE AND PLANNING BRANCH (SOUTHWEST REGION)
RESOURCE AND PLANNING BRANCH (SOUTHWEST REGION)

57. APPLICABLE DOCUMENTS. The current version of each of these documents are applicable to the implementation of the RSE project:

<u>DOCUMENT</u>	<u>TITLE</u>
DTFA01-92-C-00050	Contract with Intellect, Incorporated
FAA-STD-024	Preparation of Test and Evaluation Plans and Test Procedures
FAA-STD-036	Preparation of Project Implementation Plans
Order 1100.157	National Engineering Field Support Division, Maintenance Program Procedures
Order 1320.48	Engineering Field Support Sector Maintenance Program Procedures, National Airway Engineering Support Sector, APM-150.
Order 1800.58	NAILS Policy
Order 1800.63	NAS Program Deployment Readiness Review
Order 1800.8	National Airspace System Configuration Management
Order 1810.4	NAS Test and Evaluation Program
Order 6030.45	Facility Reference Data File

58.-59. RESERVED.

CHAPTER 6. PROJECT FUNDING

60. PROJECT FUNDING STATUS, GENERAL. Initially, this equipment was to be furnished by CIP Project 25-08, Radio Control Equipment. Due to schedule slippage resulting from default of the principal prime contractor, CIP Project 25-08 will not be able to meet the schedule requirements of SCT and D/FW. Project funding requirements are as follows:

(\$ Thousands)	<u>PRIOR</u>	<u>FY 93</u>	<u>TOTAL</u>
RSE Totals	0.0	763.962	763.962

Project funding was supplied by both the SCT and D/FW program offices for their respective requirements. This funding covers the cost of hardware, training, and extended warranty only. All other ancillary costs (such as telecommunications, installation, etc.) are covered by the overall program budgets.

61.-69. RESERVED.



CHAPTER 7. DEPLOYMENT

70. GENERAL DEPLOYMENT ASPECTS. The Associate Administrator for Airway Facilities, AAF-1, is responsible for the RSE Project deployment determination. The deployment determination will be based on an FAA assessment of the extent to which the RSE Project equipment is ready to be successfully integrated into the NAS and the extent to which the FAA infrastructure is prepared to accept, operate, and support the deployed equipment throughout its life cycle. The requirements for this assessment are established in Order 1800.63 NAS Program Deployment Readiness Review (DRR) Process. The general aspects and schedule for the RSE Project DRR process are as follows:

a. Order 1800.63 outlines the general process by which the RSE Project Manager (ANC-130) conducts an FAA review to ensure that the RSE Project equipment is ready to be integrated into the NAS and that the FAA is ready to receive, operate, and provide life cycle support to the RSE Project equipment when deployed. Two key DRR milestones are:

(1) Initiation of the DRR Process. The program management office initiated an internal review of the DRR status upon release of the solicitation. The project manager (ANC-130) and the DRR Program Manager (AAF-4) will assemble the project DRR team in accordance with Order 1800.63. Participants for this team are described in the order.

(2) Submission of the DRR Report and Briefing. After completion of shakedown testing the project manager (ANC-130) will submit a DRR report and deliver a briefing to the Deputy Associate Administrator for Airway Facilities (AAF-2).

b. The DRR team identifies issues/concerns requiring action prior to equipment deployment. All open actions are addressed in the DRR Report to AAF-2. A detailed DRR checklist, as defined in Order 1800.63 is used by the DRR team to ensure that all significant areas of concern are identified during the review. The checklist addresses:

- (1) NAS system requirements.
- (2) Maintenance planning.
- (3) Project implementation.
- (4) Contract status.

- (5) Configuration management.
- (6) Facility/site preparedness.
- (7) Test program.
- (8) Firmware integration and maintenance.
- (9) National Airspace Integrated Logistics Support.
- (10) Training.
- (11) Staffing.
- (12) Communications.
- (13) Man-machine interface.
- (14) Automated information systems security effectiveness.
- (15) General.

c. The Deputy Associate Administrator for Airway Facilities (AAF-2) chairs the DRR Executive Committee Meeting that proposes an RSE Project equipment deployment plan to be recommended to the Associate Administrator for Airway Facilities (AAF-1) for approval. The process and participants for this meeting are described in Order 1800.63.

d. The DRR schedule is as follows:

<u>DRR ACTION</u>	<u>DATE</u>
Initial DRR Review by Support Contractor	03/02/92
DRR Team Announcement	03/09/92
Initial DRR Team Meeting	04/09/92
Implement Action Plans/Close Open Issues	monthly
Distribute Action Item Updates	monthly
Distribute Draft DRR Report	04/23/93
Perform Team Review Telecon	05/07/93
Perform Program Manager Review	05/10/93
Perform Service Director Review	05/12/93
Submit DRR Report to AAF-2 (prebrief)	05/14/93
Convene DRR Executive Committee	05/27/93
DRR Report Approved	05/27/93
Close out Deployment Critical Issues	06/15/93
Monitor Non-Critical Issues	weekly
	until
	closed

5/17/93

6650.11

71. SITE PREPARATION. The site preparation activities will be completed by AF technicians in the Southwest and Western Pacific Regions. There is no requirement for additional real property to support the deployment of RSE in either region.

72. DELIVERY. The RSE Project equipment has been delivered in accordance with contract DTFA01-92-C-00050.

73.-79. RESERVED.



CHAPTER 8. VERIFICATION

80. **REQUIREMENTS VERIFICATION.** Requirements verification will be carried out during Operational Test and Evaluation (OT&E). A Factory Acceptance Test was conducted in lieu of the requirements for Contractor Integration Testing and Contractor Acceptance Inspection (CAI).

81. **OPERATIONAL TEST AND EVALUATION.** The RSE Project equipment is COTS equipment; therefore, limited OT&E is required for this procurement. OT&E integration testing will be initiated at the FAA Technical Center. Delta OT&E will be conducted in the Western-Pacific Region. OT&E Shakedown testing will be done at the first site installation.

82. **CONTRACTOR INTEGRATION TESTING.** Contractor Integration Testing is not required for this procurement.

83. **CONTRACTOR ACCEPTANCE INSPECTION.** A Contractor Acceptance Inspection (CAI) is not required for this procurement. A Site Acceptance Test Procedure to be utilized by the region/sector in determining if units are suitable for integration into the NAS will be derived from the OT&E Integration Test Procedure by ACW-400.

84. **JOINT ACCEPTANCE INSPECTION.** The Joint Acceptance Inspection (JAI) will be conducted in accordance with Order 6030.45.

85.-89. **RESERVED.**



CHAPTER 9. INTEGRATED LOGISTIC SUPPORT

90. **MAINTENANCE CONCEPT.** The RSE Project Manager (ANC-130) will coordinate the NAS ILSP for the RSE Project equipment with ANS-420 to ensure that all logistics factors are considered.

a. **Warranty.** All necessary adjustments of equipment procured hereunder, not occasioned by accident or misuse, shall be made by the vendor at their own expense, including one-way transportation cost, if any, during the 90-day period after delivery. All equipment procured hereunder shall be guaranteed for a period of 3 years from the delivery date. During the guarantee period, all broken or defective parts must be replaced (including labor and parts and one-way transportation costs if any) at the vendor's expense.

b. **Site Maintenance.** Preventive and corrective site maintenance actions will be performed by FAA personnel and will be limited to the scope of the contractor provided training course. Preventive maintenance will not be required on any component of the RSE more frequently than once every 90 days. Equipment which cannot be returned to service with site level corrective maintenance shall be replaced at the LRU level and returned to the vendor for depot level maintenance under the terms of the contract.

c. **Depot Level Maintenance.** The RSE contract provides for depot level maintenance at the vendor's facility for a period of three years. The FAA Logistics Center is not responsible for supply support, maintenance or contract management. The depot level contract support will be administered by each region. The vendor's responsibility is limited to repair and/or replacement of components resulting in deficiencies in design, workmanship, or materials.

91. **TRAINING.** The contractor has submitted a commercial training program to the FAA. Because this is a regional program, it is the responsibility of ASW-17 and ASW-400 as well as AWP-17 and AWP-400 to review the contractor's COTS training materials in accordance with Order 3000.6. The regional course numbers are WP 95440 for Western-Pacific Region and SW 92780 for Southwest Region. The approved training program will be for FAA personnel engaged in hardware maintenance training operations and maintenance. The RSE Project contractor shall provide commercial training that covers all information necessary to understand, maintain, and install this equipment. The training course syllabus is as follows:

DAY 1: System Level Configuration -7705/7706

Theory of Operation
Data-Above-Voice (DAV) Signaling
Channel Control - Local
Channel Control - Remote
Power Supplies
Alarms
Packaging/Backplane

Module Level Configuration

5130 DAV Module
 Data Link
 Voice Path
 Control Data
 Alarms
 Interface
 Front Panel Controls and Indicators

5134 Channel Control - local
 Voice Path
 Control Data
 Interface
 Front Panel Controls and Indicators

5135 Channel Control - Remote
 Voice Path
 Control Data
 Interface
 Front Panel Controls and Indicators

6112A Power Supply/Alarm Monitor

DAY 2: System Installation and Maintenance

7705 Local
7706 Remote
Voice and Data Paths
VF/FSK Alignment Procedures
Alarms
Trouble-shooting/Fault Isolation

Review / Performance Examination

a. Vendor Certification. Students who complete the operations/maintenance training courses shall be certified as

vendor qualified through a performance examination and shall be able to:

(1) Perform equipment power-up, power-down, start-up, start-over, recovery and change of operational modes.

(2) Locate and identify all assemblies and sub-assemblies.

(3) Analyze and identify problems by interpreting results of functional and diagnostics tests.

(4) Use functional and flow diagrams and test equipment, as required, to locate malfunctions to the appropriate LRU.

(5) Perform periodic maintenance as required.

(6) Remove and replace faulty LRU's.

b. Attrition Training. Employee Development Branch (Southwest Region), ASW-17, and Training/ Performance Management Branch (Western-Pacific Region), AWP-17, will each develop a plan for attrition training using contractor provided documentation.

c. FAA Training Program. ASW-17 and AWP-17 will initiate action to implement the FAA follow-on training program for RSE Project equipment.

92. SPECIAL TOOLS AND TEST EQUIPMENT. No special tools or equipment are required to support the RSE Project.

93. SUPPLY SUPPORT. This paragraph describes the concept to be used in providing supply support for LRU spares and repair parts necessary to accomplish RSE maintenance. There are two levels of supply at which material will be available to support the RSE:

a. SITE SUPPORT. Spare parts located with the equipment to be supported include LRU's and low dollar, expendable items such as bulk hardware, fuses, and filters. The regions are responsible for the purchase of replenishment site spares after the first 3 years of contract support.

b. DEPOT SUPPORT. The FAA Logistics Center will not be requested to provide any depot level support. The contractor will provide and repair all depot stocks. When an LRU fails, the site will return the failed LRU directly to the contractor. The contractor will ship the repaired/new LRU directly to the site within the time constraints specified in the contract.

94. VENDOR DATA AND TECHNICAL MANUALS. The RSE Project contractor will be responsible for providing commercially available technical manuals as an integral part of this equipment procurement.

95. EQUIPMENT REMOVAL. The RSE Project equipment will not replace other equipment.

96. FACILITIES. The RSE Project equipment will be configured to fit within existing space allocated at the FAA facilities. Specific space requirements for equipment have been identified in paragraphs 31 and 32. No special responsibilities have been assigned to the Government for designing, developing, or acquiring support facilities.

97.-99. RESERVED.

CHAPTER 10. ADDITIONAL PROJECT IMPLEMENTATION ASPECTS**100. CONFIGURATION MANAGEMENT.**

a. Acquisition Configuration Management. The contractor's responsibilities are limited to furnishing equipment and documentation that is compliant with the performance and other specifications applicable to the part number as set forth in Section B and Section J-2 of contract DTFA01-92-C-00050.

b. Implementation Configuration Control. AOS-200 will assume the responsibility for maintaining the operational configuration in accordance with Order 1100.157, National Engineering Field Support Division, Maintenance Program Procedures. Guidance and procedures in Order 1800.8, National Airspace System Configuration Management will be followed to ensure a smooth and efficient transfer between the project office and the System Maintenance Service.

101.-109. **RESERVED.**

